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Introduction: Realistic Implementation of Plasma-Surface Interactions in Simulations of Technological Plasmas

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The interactions of plasma particles with the boundary surfaces affect the discharge by particle absorption, emission, reflection, etc. In the simulations, these processes are described by surface interaction coefficients. The surface coefficients are input parameters in the simulations, which are often unknown from measurements, therefore roughly estimated. However, these parameters can largely influence the calculated discharge characteristics. Recently, the importance of the realistic description of the various surface processes in simulations of technological plasmas has attracted increasing attention.
The objective of the workshop is to stimulate discussion about the description of various plasma-surface interactions in discharge models, to provide basic theoretical aspects behind the plasma-surface models used in the simulations, theoretical and experimental results on plasma-surface interactions to improve the discharge models, to present numerical challenges encountered in the simulations, experiments with validation efforts and examples of successful validation works.